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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/265,214	03/10/1999	BRUCE A. PHILLIPS	1552(USW-050	4266

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EXAMINER

HYUN, SOON D

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 07/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/265,214

Applicant(s)

PHILLIPS ET AL.

Examiner

Soon-Dong Hyun

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 U.S.C. § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 7, 8, 12, 15, 17, and 18, the term “configured” renders each claim indefinite, because it is not clear whether each xDSL modem (for example claims 1, 12 and 15) has a function to provide communications or not.

Claim Rejections - 35 U.S.C. § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was

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commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CAR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-6, 9-16, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gultekin et al (U.S. Patent No. 6,215,793) in view of Kaku et al (U.S. Patent No. 4,868,850).

Regarding claims 1, 3, 4, 11-13, 15, and 21, Gultekin et al (Gultekin) discloses an upstream xDSL modem (a central office xDSL modem, TRX1) and a plurality of downstream xDSL modems (remote terminal xDSL modems), wherein packet based downstream data is broadcasted over a point-to-multipoint connection on a twisted pair. See col. 1, line 29, col. 5, lines 30-41, col. 9, line 63-col. 10, line 3 and FIG. 1.

However, Gultekin does not explicitly teach whether the plurality of remote xDSL modems are connected to the twisted pair via a corresponding tap defined along the twisted pair.

Kaku et al (Kaku) discloses a multipoint type modem communication system, wherein a central office modem (101) is connected to a plurality of local modems (201, 211, 221) using a twisted line via a corresponding tap to save line-use fees. Kaku does not explicitly teach the tap, but providing an interface (tap) for each local modem and communications between each modem and its corresponding interface are inherently required, because the line is shared by the plurality

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of local modems and the local modems are connected in parallel. See col. 1, lines 16-35, col. 5, lines 37-47 and FIG. 2.

Those of skill in the art would have been motivated by Kaku to incorporate the point-to-multipoint connection into Gultekin to save line-use fees. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate a point-to-multipoint communication system using a twisted pair for xDSL communication system.

Regarding claims 2 and 16, Gultekin further teaches that the xDSL modem could be a VDSL modem. See col. 9, lines 35-47.

Regarding claims 5 and 6, Gultekin does not explicitly teach the category of the twisted pair, but the twisted pair comprises a twisted pair of Category 3 or 5.

Regarding claims 9 and 19, an access control protocol is inherently required for upstream transmission for point-to-multipoint communications of Gultekin, because the plurality of local xDSL modems should have a rule to access to the central xDSL modem. However, the Gultekin does not explicitly teach an access protocol to the central modem. This is an Official Notice that a contention-based access protocol is a basic access protocol and well known in the art. Therefore, it would have been obvious to one having ordinary skill to adopt a contention-based protocol into Gultekin for the access.

Regarding claims 10 and 20, Gultekin does not explicitly teach an access protocol to the central modem. Kaku teaches a time division protocol for the access. See col. 5, lines 39-40. Those of skill in the art would have been motivated by Kaku incorporate the time division

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multiple access protocol (TDMA) to take advantage of the TDMA protocol which is well known in the art.

Therefore, it would have been obvious to one having ordinary skill in the art to incorporate a TDMA protocol.

Regarding claim 14, Gultekin does not teach whether the central office modem is located outside the central office. Those of skill in the art would have been motivated to locate the central (office) modem outside the central office, i.e., location near to the plurality of local modems, for a higher bandwidth and a plurality of the central modems are connected to the central office via a fiber optic cable. Therefore, it would have been obvious to one having ordinary skill in the art to locate the central modem outside the central office and connect the central modem to the central office via a fiber optic cable.

6. Claims 7, 8, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gultekin et al (U.S. Patent No. 6,215,793) and Kaku et al (U.S. Patent No. 4,868,850) as applied to claims 1 and 15 above, and further in view of Henderson et al (U.S. Patent No. 6,101,216).

Kultekin + Kaku as discussed above does not teach whether the central modem is connected to outside switching networks. Henderson et al (Henderson) teaches that a DSL modem in the central office is connected to an outside data network. The outside data network of Henderson comprises an ATM network for high-speed access to the Internet. See col. 1, lines 10-20. Those of skill in the art would have been motivated by Henderson to connect the central modem of Kultekin to ATM network for high-speed access to an Internet. Therefore, it would

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have been obvious to one having ordinary skill in the art to connect the central modem to an ATM network.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6148006 (Dyke et al), 6205220 (Jacobsen et al), 6282189 (Eames), and 6307889 (Chun) relate to xDSL communications.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Soon-Dong Hyun whose telephone number is (703) 305-4550. The examiner can normally be reached on Monday-Friday from 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen, can be reached on (703) 308-5340.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

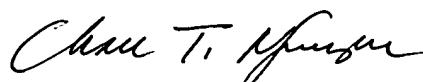
9. Any response to this action should be mailed to:

Commissioner for Patents

Washington, D.C. 20231

Or faxed to: 703-872-9314 for formal communications intended for entry with a label of

"OFFICIAL" and for informal or draft communications with a label of "PROPOSED" or "DRAFT" (attn: Art Unit 2663, Soon-Dong Hyun).



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